

## عنوان مقاله:

Feasibility Study and Simulation of Utilization of Renewable Energies in a Broiler Industry

## محل انتشار:

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## خلاصه مقاله:

This research was conducted to feasibility study and simulation of utilization of renewable energies (solar and biomass) in broiler industry in Khorramabad County. Data was collected by field sampling (for a breeding period in winter ۲۰۱۵-۲۰۱۶) and from organizations. In the simulation of a grid-connected photovoltaic system (۲۰ kW) with PVsyst ۶.۷ software, the average performance ratio and available useful energy of the system were calculated at ۰.۷۸۵ and ۴.۷۵ kWh/kWp/day, respectively. The use of photovoltaic system can cover ۲۵% of electrical energy in broiler production farms in winter season. Also, in feasibility study of combined heat and power system, the potential of biogas production from broiler manure was calculated at ۴۴۸.۵ m<sup>۳</sup> per ۱۰۰۰ pieces of broiler. The use of biogas plant can supply ۹۸% of the electrical energy of broiler production farms in winter season. According to the results, the use of renewable energies in the present conditions, despite the reduction of fossil fuels consumption and many environmental benefits, in the broiler industry is not economical.

## کلمات کلیدی:

Solar Energy, BioGas, Photovoltaic system, Combined heat and power system (CHP), broiler

## لینک ثابت مقاله در پایگاه سیویلیکا:

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